CLAIMS

We Claim:

1. A method of adaptively managing connectivity for a mobile device comprising:
   a. obtaining a signal from each access point available to the mobile device, wherein the signal includes source information; and
   b. obtaining characteristic information about each access point and characteristics of service provided by the access point using the source information.

2. The method as claimed in claim 1 wherein the signal is a beacon signal.

3. The method as claimed in claim 1 further comprising comparing the characteristic information to determine a preferred access point.

4. The method as claimed in claim 3 wherein the preferred access point is an access point which most closely matches criteria.

5. The method as claimed in claim 2 wherein the source information includes an address and is resident within an SSID of the beacon signal.

6. The method as claimed in claim 5 wherein the address is a URL address.

7. The method as claimed in claim 5 wherein the address is an IPv6 address.

8. The method as claimed in claim 1 wherein the source information includes the characteristic information.

9. The method as claimed in claim 1 further comprising associating a separate IPv6 address for communications relative to each separate application used by the mobile device.

10. The method as claimed in claim 1 further comprising associating a separate IPv6 address for communications relative to each separate application used with each separate connection by the mobile device.

11. The method as claimed in claim 1 wherein the characteristic information is obtained for an access point without forming a connection to the access point.

12. The method as claimed in claim 1 wherein an access point is available if the mobile device is within a range to communicate with the access point.

13. The method as claimed in claim 1 wherein the characteristics of service include one or more of bandwidth, speed and cost.

14. A method of adaptively managing connectivity for a mobile device comprising:

a. managing communications for the mobile device using a plurality of applications; and

b. associating a separate IPv6 address for communications relative to each separate application.

15. The method as claimed in claim 14 further comprising sending communications from the mobile device through one of a plurality of interfaces based on the separate IPv6 address and corresponding application.

16. The method as claimed in claim 14 further comprising receiving communications at the mobile device through one of a plurality of interfaces based on the separate IPv6 address and corresponding application.

17. The method as claimed in claim 14 further comprising:

a. obtaining a beacon signal from each access point available to the mobile device, wherein the beacon signal includes source information;

b. obtaining characteristic information about each access point and characteristics of service provided by the access point using the source information;

c. determining a preferred access point by comparing the characteristic information to criteria and determining the access point which most closely matches the criteria; and

d. establishing a connection with the preferred access point.

18. A method of adaptively managing connectivity for a mobile device comprising:

a. obtaining a beacon signal from each access point available to the mobile device, wherein the beacon signal includes source information;

b. obtaining characteristic information about each access point and characteristics of service provided by the access point using the source information; and

c. determining a preferred access point by comparing the characteristic information to criteria and determining the access point which most closely matches the criteria.

19. The method as claimed in claim 18 further comprising establishing a connection with the preferred access point.

20. The method as claimed in claim 19 wherein the connection is established using communications complying with an IEEE 802.11 standard.

21. The method as claimed in claim 18 wherein the source information includes an address and is resident within an SSID of the beacon signal.

22. The method as claimed in claim 21 wherein the address is a URL address.

23. The method as claimed in claim 21 wherein the address is an IPv6 address.

24. The method as claimed in claim 18 wherein the source information includes the characteristic information.

25. The method as claimed in claim 18 wherein an access point is available if the mobile device is within a range to communicate with the access point.

26. The method as claimed in claim 18 wherein the characteristics of service include one or more of bandwidth, speed and cost.

27. The method as claimed in claim 18 wherein the characteristic information is obtained for an access point without forming a connection to the access point.

28. The method as claimed in claim 18 further comprising associating a separate IPv6 address for communications relative to each separate application used by the mobile device.

29. The method as claimed in claim 18 further comprising associating a separate IPv6 address for communications relative to each separate application used with each separate connection by the mobile device.

30. A network connection manager configured to adaptively manage connectivity for a mobile device, the network connection manager comprising:

a. a communications interface configured to receive communications from access points available to the mobile device, the communications including a beacon signal from each available access point, wherein the beacon signal includes source information; and

b. a controller coupled to the communications interface to obtain characteristic information about each access point and characteristics of service provided by the access point using the source information.

31. The network connection manager as claimed in claim 30 wherein the controller compares the characteristic information to determine a preferred access point.

32. The network connection manager as claimed in claim 31 wherein the preferred access point is an access point which most closely matches criteria.

33. The network connection manager as claimed in claim 32 wherein the criteria is defined by a user.

34. The network connection manager as claimed in claim 30 wherein the source information includes an address and is resident within an SSID of the beacon signal.

35. The network connection manager as claimed in claim 34 wherein the address is a URL address.

36. The network connection manager as claimed in claim 34 wherein the address is an IPv6 address.

37. The network connection manager as claimed in claim 30 wherein the source information includes the characteristic information.

38. The network connection manager as claimed in claim 30 wherein the characteristic information is obtained for an access point without forming a connection to the access point.

39. The network connection manager as claimed in claim 30 wherein an access point is available if the mobile device is within a range to communicate with the access point.

40. The network connection manager as claimed in claim 30 wherein the characteristics of service include one or more of bandwidth, speed and cost.

41. The network connection manager as claimed in claim 30 wherein the controller associates a separate IPv6 address for communications relative to each separate application used by the mobile device.

42. The network connection manager as claimed in claim 30 wherein the controller associates a separate IPv6 address for communications relative to each separate application used with each separate connection by the mobile device.

43. A network connection manager for adaptively managing connectivity for a mobile device comprising:

a. means for interfacing for receiving communications from access point available to the mobile device, the communications including a beacon signal from each available access point, wherein the beacon signal includes source information; and

b. means for controlling coupled to the means for interfacing for obtaining characteristic information about each access point and characteristics of service provided by the access point using the source information.

44. The network connection manager as claimed in claim 43 wherein the means for controlling compares the characteristic information to determine a preferred access point.

45. The network connection manager as claimed in claim 44 wherein the preferred access point is an access point which most closely matches criteria.

46. The network connection manager as claimed in claim 45 wherein the criteria is defined by a user.

47. The network connection manager as claimed in claim 43 wherein the source information includes an address and is resident within an SSID of the beacon signal.

48. The network connection manager as claimed in claim 47 wherein the address is a URL address.

49. The network connection manager as claimed in claim 47 wherein the address is an IPv6 address.

50. The network connection manager as claimed in claim 43 wherein the source information includes the characteristic information.

51. The network connection manager as claimed in claim 43 wherein the characteristic information is obtained for an access point without forming a connection to the access point.

52. The network connection manager as claimed in claim 43 wherein an access point is available if the mobile device is within a range to communicate with the access point.

53. The network connection manager as claimed in claim 43 wherein the characteristics of service include one or more of bandwidth, speed and cost.

54. The network connection manager as claimed in claim 43 wherein the means for controlling associates a separate IPv6 address for communications relative to each separate application used by the mobile device.

55. The network connection manager as claimed in claim 43 wherein the means for controlling associates a separate IPv6 address for communications relative to each separate application used with each separate connection by the mobile device.

56. A network connection manager configured to adaptively manage connectivity for a mobile device, the network connection manager comprising:

a. a plurality of interfaces each configured to send and receive communications for one of a plurality of applications used by the mobile device; and

b. a controller coupled to the plurality of interfaces to associate a separate IPv6 address for communications relative to each separate application, wherein only

communications having an address corresponding to an application and a corresponding interface are sent and received through the interface.

57. A network of devices comprising:

a. a plurality of access points each including:

i. a wireless interface through which access point communications are sent and received including a beacon signal having source information; and

ii. a server interface configured to couple to one or more internet servers to provide internet communications with the servers for devices communicating through the wireless interface;

b. a mobile device configured to communicate with the wireless interface and including a network connection manager which adaptively manages connectivity for the mobile device, the network connection manager comprising:

i. a communications interface configured to receive the access point communications; and

ii. a controller coupled to the communications interface to obtain characteristic information about each access point available to the mobile device and characteristics of service provided by the access points using the source information.

58. The network of devices as claimed in claim 57 wherein the controller compares the characteristic information to determine a preferred access point.

59. The network of devices as claimed in claim 58 wherein the preferred access point is an access point which most closely matches criteria.

60. The network of devices as claimed in claim 59 wherein the criteria is defined by a user.

61. The network of devices as claimed in claim 57 wherein the source information includes an address and is resident within an SSID of the beacon signal.

62. The network of devices as claimed in claim 61 wherein the address is a URL address.

63. The network of devices as claimed in claim 61 wherein the address is an IPv6 address.

64. The network of devices as claimed in claim 57 wherein the source information includes the characteristic information.

65. The network of devices as claimed in claim 57 wherein the characteristic information is obtained for an access point without forming a connection to the access point.

66. The network of devices as claimed in claim 57 wherein an access point is available if the mobile device is within a range to communicate with the access point.

67. The network of devices as claimed in claim 57 wherein the characteristics of service include one or more of bandwidth, speed and cost.

68. The network of devices as claimed in claim 57 wherein the controller associates a separate IPv6 address for communications relative to each separate application used by the mobile device.

69. The network of devices as claimed in claim 57 wherein the controller associates a separate IPv6 address for communications relative to each separate application used with each separate connection by the mobile device.